
Index

A

- accessing Configuration/Setup Utility program 4-6
- activity monitor option 4-21
- adapters, installing 3-6
- add
 - drivers 2-5
 - internal drive 3-7
 - memory modules 3-3
 - SBC 3-3
 - system memory 3-3
- address conflicts 5-7
- administrator password option 4-14
- advanced power management option 4-20
- advanced setup option 4-17
- advanced video memory option 4-17
- agency and standards compliance 1-5
- amplitude-shift keying (ASK) 6-8
- APM BIOS mode option 4-21
- application-specific drivers 4-22
- assignments, serial port 4-25
- automatic power management (APM) 4-21

B

- backplane and cables (FRUs) 8-5
- backplane, removing and replacing 7-52
- battery failure error message 5-10
- battery, memory-retention 4-24
- battery, replacing 7-51
- beep symptoms 7-20
- beeps, POST 7-3
- BIOS level 7-2
- BIOS, updating 4-30
- blank screen 5-5
- boot error, hard disk 7-33
- bottom cover (FRUs) 8-2
- brightness control 2-4
- broken cover lock 5-6
- BTUs (British Thermal Units) 1-4
- bus card connectors B-5

C

- C2 security 4-3
- cable connectors B-5
- cables, connecting 2-4
- cache control option 4-17
- change
 - configuration information 4-5, 4-8
 - logical unit numbers 7-8
 - selected tests in test groups 7-9
 - serial port assignments 4-25

- channel assignments, DMA C-2
- chassis or cover intrusion 4-3
- checkouts
 - beeps 7-20
 - display 7-18
 - general 7-11
 - keyboard 7-12
 - Module Tests Menu 7-6
 - no beeps 7-21
 - power supply 7-16
 - power-supply connections 7-17
 - printer 7-15
 - USB port 7-13
- code page 4-30
- color graphics adapter (CGA) 4-29
- color, high resolution 4-29
- command-line options 7-7
- communications 4-26
- component layout, 7563 Passive Backplane System 1-2
- COMx settings (serial port) 4-25
- configuration
 - 7563 Passive Backplane System 4-1
 - activity monitor 4-21
 - administrator password 4-14
 - advanced power management 4-20
 - advanced setup 4-17
 - APM BIOS mode 4-21
 - cache control 4-17
 - changing 4-5
 - conflicts 4-4
 - date and time 4-12
 - device change 5-13
 - DMA resources 4-20
 - drive security option 4-13
 - errors 4-4
 - Ethernet setup 4-17
 - hardware change 5-9
 - I/O port resources 4-19
 - interrupt resources 4-20
 - ISA legacy resources 4-18
 - memory change 5-13
 - memory resources 4-19
 - overview 4-4
 - PCI control 4-18
 - plug and play control 4-18
 - power-on password 4-14
 - product data 4-8
 - ROM shadowing 4-18
 - start options 4-15
 - system security 4-13
 - system summary option 4-8

- configuration (*continued*)
 - USB setup 4-17
 - utility program 4-5
 - video 4-30
 - video memory setup 4-17
 - viewing information 4-8
 - watchdog/thermal setup 4-17
 - Configuration/Setup Utility program
 - activity monitor option 4-21
 - administrator password option 4-14
 - advanced power management option 4-20
 - advanced setup 4-17
 - APM BIOS mode option 4-21
 - cache control option 4-17
 - date and time option 4-12
 - description 5-1
 - devices and I/O ports option 4-9
 - DMA resources 4-20
 - drive security option 4-13
 - Ethernet setup 4-17
 - hard disk drive option 4-11
 - I/O port resources 4-19
 - IDE drives setup option 4-11
 - interrupt resources option 4-20
 - ISA legacy resources 4-18
 - main menu screen 4-7
 - memory resources option 4-19
 - moving around in the screens 4-7
 - PCI control option 4-18
 - plug and play control 4-18
 - power-on password 4-14
 - product data option 4-8
 - ROM shadowing 4-18
 - run 2-5
 - service procedures 7-1
 - start options 4-15
 - starting 4-6
 - system security option 4-13
 - system summary 4-8
 - USB setup 4-17
 - use 4-5
 - video setup option 4-11
 - watchdog/thermal setup 4-17
 - conflicts, eliminating assignment 5-7
 - connect cables 2-4
 - connectivity D-15
 - connectors
 - backplane, model 001 B-5
 - bus card B-5
 - cable B-5
 - SBC 6-5
 - USB port 6-8
 - core voltage, processor 6-14
 - cover intrusion connector 6-10
 - cover intrusion detection 4-3
 - cover lock, broken 5-6
 - cover, removing 3-2
- ## D
- data, transferring 4-26
 - date and time option 4-12
 - date and time, setting 4-12
 - detecting POST errors 5-1, 5-2
 - detection, cover intrusion 4-3
 - device configuration error 5-13
 - device drivers
 - adding 2-5
 - application specific 4-22
 - device specific 4-22
 - installing 2-5
 - overview 4-22
 - video 4-29
 - device drivers, downloading 7-2
 - device records A-1
 - devices and I/O ports option 4-9
 - devices, handling discharge-sensitive D-13
 - diagnostic
 - beep codes 7-20
 - command-line options 7-7
 - diskette 7-5
 - error messages 5-2, 7-4, 7-26
 - program 7-5
 - QAPLus/PRO program 7-5
 - starting diagnostic program 7-8
 - tests, extended memory 7-8
 - tools 5-1, 7-3
 - dimensions (7563 Passive Backplane System) 1-4
 - DIMMs, installing 3-3
 - direct memory access (DMA) channel
 - assignments 4-22, 4-23, C-2
 - discharge-sensitive devices, handling D-13
 - disconnecting cables 7-34
 - diskette
 - diagnostic programs 5-3
 - Diagnostics 5-1
 - drive access 4-2
 - drive in-use lights 5-4
 - drive replacement 7-37
 - FRUs 8-2
 - parts catalog 8-2
 - security option 4-13
 - starting the diagnostic program 7-8
 - update 4-30
 - diskettes drives, security 4-13
 - display
 - blank screen 5-5
 - checkout 7-18
 - distorted screen 5-5
 - error codes 5-2, 5-8
 - jitter 5-5

- display (*continued*)
 - problems 5-5, 5-8
 - rolling screen 5-5
 - selecting 4-29
 - self-tests 5-4
 - support 4-30
 - SVGA 4-29
 - wavy screen 5-5
- display power management signaling (DPMS) 6-3
- DMA channel assignments 4-22, 4-23, C-2
- DMA resources option 4-20
- downloading programs 7-2
- DPMS
 - See display power management signaling (DPMS)
- drives
 - description A-1
 - diskette drive replacement 7-37
 - hard disk 4-11
 - hard disk boot error 7-33
 - hard disk jumper settings B-2
 - in-use lights 5-4
 - installing external device 4-27
 - installing internal 3-7
 - parts catalog 8-2
 - replacing hard disk 7-38, 7-39
 - security option 4-13
- dual inline memory modules (DIMMs) 3-3

E

- EEPROM code, updating 4-30
- EEPROM, Flash 4-30
- electrical safety D-9
- electronic emission D-15
- electrostatic devices, handling D-13
- emission, electronic D-15
- enhanced graphics adapter (EGA) 4-29
- environment specifications 1-4
- equipment approvals and certifications 1-5
- error recovery timer 4-28
- errors
 - battery failure 5-10
 - beep symptoms 7-20
 - code format, POST 7-4
 - configuration 4-4
 - detecting POST 5-2
 - device configuration 5-13
 - diagnostic 5-9
 - hard disk boot error 7-33
 - memory configuration 5-13
 - message types 7-4
 - messages 5-2, 5-8, 5-9, 7-26
 - numeric codes 7-22
 - POST 4-5, 5-2, 5-9, 5-10
 - prompt 5-8
 - software 5-9

- errors (*continued*)
 - types of messages 7-4
- Ethernet access 4-2
- Ethernet setup option 4-17
- external serial devices, installing 4-25

F

- fan (power supply) problems 5-6
- fans and filters (FRUs) 8-5
- feature cards, replacing 7-36
- field-replaceable units (FRUs)
 - part numbers
 - backplane and cables 8-5
 - bottom cover 8-2
 - CD-ROM drives 8-2
 - diskette drives 8-2
 - fans and filters 8-5
 - hard disk drives 8-2
 - IBM SBC 8-2
 - keyboards 8-7
 - mouse 8-7
 - power cord 8-7
 - top cover 8-4
 - removing
 - adapters 7-36
 - backplane 7-52
 - battery 7-51
 - diskette drive 7-37
 - front fan 7-41
 - hard disk drive 7-38
 - LED assembly 7-43
 - memory modules 7-49
 - power supply 7-40
 - power switch 7-43
 - processor chip 7-47
 - rear fan 7-42
 - SBC 7-44
- Flash (BIOS/VPD) update procedure 7-2
- flash, verifying revision level 4-30
- flicker 4-29
- front fan, replacing 7-41
- FRUs
 - See field-replaceable units (FRUs)

G

- general checkout 7-11
- general problems 5-6
- general safety D-8
- graphics 4-29
- grounding requirements D-13
- guide, safety inspection D-12

H

- handling electrostatic-discharge-sensitive devices D-13
- handling static-sensitive devices D-13
- hard disk
 - bad sector 5-8
 - boot error 7-33
 - drive access 4-2
 - FRUs 8-2
 - jumper settings B-2
 - parts catalog 8-2
 - replacing 7-38, 7-39
 - security option 4-13
 - testing 5-8
- hardware
 - diagnostic error messages 7-26
 - problems 5-1, 7-3
 - testing programs 5-1
- heat output 1-4
- high-resolution color 4-29
- home page, Internet 7-2
- host-bus interface 6-3
- hub, USB port 4-28

I

- I/O port resources option 4-19
- I/O ports, configuration information 4-9
- IBM SBC
 - See single-board computer (IBM SBC)
- ID numbers, system unit A-1
- IDE drives setup option 4-11
- in-use lights 5-4
- indicator lights problem 5-6
- indicators, SBC 6-3
- industry-standard architecture (ISA)-bus adapters C-1
- infrared port (IrDA) 6-8
- inspection guide, safety D-12
- install
 - 7563 Passive Backplane System 2-1
 - adapters 3-6
 - application programs 4-2
 - device drivers 2-5
 - external parallel devices 4-27
 - external serial devices 4-25
 - internal drive 3-7
 - internal options 2-3
 - memory modules 3-3
 - options 3-1
 - parallel devices, external 4-27
 - RAM upgrade 3-3
 - SBC 3-3
 - serial devices, external 4-25
- interface standard, serial IR 6-8
- intermittent problems 5-6

- internal drive, installing 3-7
- internal/external drivers A-1
- Internet address 7-2
- interrupt
 - and DMA assignments C-1
 - request assignments C-1
- interrupt resources option 4-20
- intrusion connector, cover 6-10
- ISA legacy resources 4-18
- ISA-bus adapters C-1

J

- jumpers and switches, SBC 4-23

K

- keyboard
 - part numbers 8-7
- keyboard problems 5-6
- keyboardless operation mode 4-3
- kits, installing memory upgrade 3-3

L

- languages 4-30
- layout, 7563 Passive Backplane System
 - components 1-2
- LED assembly, replacing 7-43
- LEDs 4-1
- lithium battery 4-24
- lock for cover, broken 5-6
- logical unit numbers, changing 7-8

M

- mass storage device configuration information 4-11
- MCGA (multicolor graphics array) 4-29
- memory architecture, unified 6-3
- memory resources option 4-19
- memory setup option, video 4-17
- Memory Test Group 7-8
- memory-retention battery 4-24
- memory, adding 3-3
- menu, module tests 7-6
- messages
 - battery failure error 5-10
 - beep/blink patterns 7-4
 - device configuration error 5-13
 - diagnostic error 5-9, 7-4, 7-26
 - enter password prompt 5-2
 - error 5-2
 - memory configuration error 5-13
 - multiple 7-4
 - POST error 5-1, 5-2, 5-10, 7-4
 - software-generated 7-4
 - types of error 7-4

- miscellaneous connectors 6-10
- Module Tests Menu 7-6
- module tests selection 7-8
- monitor, thermal/watchdog 4-28
- mount 7563 Passive Backplane System 2-3
- mouse (FRUs) 8-7
- mouse problems 5-6

N

- no beeps 7-21
- notices D-1
- numeric error codes 7-22

O

- on/off switch 4-1
- open 7563 Passive Backplane System 3-2
- open the system unit 7-35
- operator information 4-1
- options, adding 3-1
- overview of 7563 Passive Backplane System 1-1

P

- parallel devices, external 4-27
- parallel port assignments 4-26
- parallel port mode, changing 4-27
- parts catalog 8-1
 - backplane and cables 8-5
 - bottom cover 8-2
 - CD-ROM drives 8-2
 - diskette drives 8-2
 - fans and filters 8-5
 - hard disk drives 8-2
 - IBM SBC 8-2
 - keyboards 8-7
 - mouse 8-7
 - power cord 8-7
 - top cover 8-4
- passwords
 - administrator 4-14
 - power-on 4-2, 4-14, 5-2, 5-6
 - prompt 5-8
 - removing 4-3
 - system administrator 4-3
- PCI control option 4-18
- physical specifications 1-4
- PICMG (PCI Industry Computer Manufacture's Group) 1-1
- pin assignments, serial port B-8
- plug and play control 4-18
- pointing-device problems 5-6
- port access, USB 4-2
- port assignment conflicts 5-7

- ports, configuring I/O 4-9
- POST

- See power-on self-test (POST)

- power cord part numbers 8-7
- power supply 1-4
- power supply, replacing 7-40
- power switch, replacing 7-43
- power switch, setting 2-2
- power-on password 5-2, 5-6
- power-on password option 4-14
- power-on problems 5-2, 5-7
- power-on self-test (POST)

- battery failure error 5-10

- beeps 7-3

- description 5-1

- detecting problems 7-3

- error 4-5

- error detection 5-1, 5-2

- error messages 5-2, 5-10

- operation 5-1, 5-2

- problem detecting 7-3

- updating 4-30

- power, switching off 7-34

- problems

- diskette drive 5-4

- display 5-5

- error prompt 5-8

- fan 5-6

- forgotten power-on password 5-6

- general 5-6

- hardware 5-1

- hardware related 7-3

- intermittent 5-6

- keyboard 5-6

- mouse 5-6

- no beeps 5-5

- occasional 5-6

- options 5-7

- overview 5-1

- password prompt 5-8

- pointing-device 5-6

- power-on 5-2, 5-7

- printer 5-8

- screen distortion 5-5

- screen jitter 5-5

- screen roll 5-5

- software 5-1, 5-9

- solving 5-1, 5-2

- troubleshooting charts 5-4

- undetermined 7-33

- user error 5-1

- wrong number of beeps 5-5

- wrong screen characters 5-5

- processor chip, removing and replacing 7-47

- processor voltage selection 6-14

product data option 4-8

program

- Configuration/Setup Utility 5-1

- diagnostic 5-1, 5-3

- navigation 7-6

- power-on self-test (POST) 5-1

- program, diagnostic 7-5

- QAPlus/PRO 7-5

- system 4-5, 4-30

- test 7-5

- utility 4-5

Q

QAPlus/PRO diagnostic program 7-5

R

RAM upgrade kits, installing 3-3

rear fan, replacing 7-42

records, device A-1

remove and replace

- adapters 7-36

- backplane 7-52

- battery 7-51

- diskette drive 7-37

- feature cards 7-36

- front fan 7-41

- hard disk drive 7-38, 7-39

- LED assembly 7-43

- memory modules 7-49

- power supply 7-40

- power switch 7-43

- procedures for 7-1, 7-34

- processor chip 7-47

- rear fan 7-42

- SBC 7-44

remove cover 3-2

removing the system unit from its mounting 7-35

replacement parts 8-1

requirements, grounding D-13

restore configuration 4-5

revision level, verifying flash 4-30

ROM (read-only memory) 4-30

ROM shadowing 4-18

run selected module tests 7-9

S

safety

- electrical D-9

- general D-8

- information D-8

- inspection guide D-12

SBC

- See single-board computer (IBM SBC)

scripting 7-8

SCSI ID A-1

secure system unit 2-3

security features 4-2

security option, drive 4-13

selected module tests, running 7-9

selected tests in test groups, changing 7-9

self-tests, internal 5-1, 5-2

sensor, temperature 4-28

serial devices, external 4-25

serial IR (SIR) standards 6-8

serial IR standards 6-8

serial port 4-24

serial port assignments 4-25

serial port pin assignments B-8

service diagnostic program 7-5

set date and time 4-12

shadow ROM 4-18

SIMMs, installing 3-3

single-board computer (IBM SBC)

- component layout 6-2

- connectors 6-5

- features 6-1

- FRUs 8-2

- indicators 6-3

- installing 3-3

- jumpers and switches 4-23

- memory subsystem 6-2

- memory upgrade 3-3

- parts catalog 8-2

- power-supply connections 7-17

- remove 3-3

- removing and replacing 7-44

- switch functions 6-12, B-7

- updating flash EEPROM 4-30

- video subsystem 6-3

slow IR (SIR) standard 6-8

software

- errors 5-9

- problems 5-1, 5-2

solving problems 5-1

special characters 4-30

specifications, physical 1-4

start

- Configuration/Setup Utility program 4-6

- diagnostic programs 5-3

- system unit 5-2

start options 4-15

startup-sequence control 4-3

static-sensitive devices, handling D-13

stopping tests 7-9

storage device, mass, configuration information 4-11

SVGA

- advantages 4-29

- description 4-29

- languages 4-30

- SVGA (*continued*)
 - software compatibility 4-29
 - special characters 4-30
 - video configuration 4-30
- switch
 - on/off 4-1
 - processor speed 6-13
 - replacing power 7-43
 - SBC 6-12, B-7
 - voltage-selection 5-2
- switching off power 7-34
- symptom-to-FRU index 7-19
- symptoms, beep 7-20
- symptoms, no beeps 7-21
- system
 - programs, update 4-30
 - unit ID numbers A-1
 - unit, opening 7-35
- system memory, installing 3-3
- system memory, replacing 7-49
- system records A-1
- system security option 4-13
- system summary option 4-8

T

- temperature, ambient air 1-4
- test group, memory 7-8
- test groups, viewing 7-7
- test program, hardware 5-1
- test scripts 7-8
- test the system unit 5-2
- tests menu, module 7-6
- tests, stopping 7-9
- thermal monitor 4-28
- time and date, setting 4-12
- timer, watchdog 4-28
- tools, diagnostic 5-1
- top cover (FRU) 8-4
- trademarks and service marks D-18
- transferring data 4-26
- troubleshooting charts 5-4

U

- undetermined problems 7-33
- unified memory architecture 6-3
- Universal Serial Bus (USB) 1-1
 - port access 4-2
 - port checkout 7-13
 - port connector 6-8
 - port testing 7-5
 - ports 4-28
 - setup option 4-17
- update
 - flash EEPROMs 4-30

- update (*continued*)
 - system programs diskette 4-30
 - system unit configuration 4-5
- update programs, downloading 7-2
- USB
 - See Universal Serial Bus (USB)
- user error problems 5-1
- using QAPLus/PRO program 7-5
- using test programs 7-5
- utility program, Configuration/Setup 4-5

V

- verifying flash revision level 4-30
- vertical-refresh rate 4-30
- video
 - configuration 4-30
 - device drivers 2-5
 - standards 4-29
- video connector 6-9
- video graphics subsystem 6-3
- video memory setup option 4-17
- video setup option 4-11
- view
 - configuration information 4-5, 4-8
 - serial port assignments 4-25
 - test groups 7-7
- vital product data code 7-2
- voltage range 1-4
- voltage selection, processor B-7
- voltage selection, processor core 6-14
- voltage setting 2-2
- voltage-selection switch 2-2, 5-2, 7-40

W

- watchdog timer 4-28
- watchdog/thermal setup option 4-17
- Web site 7-2



Part Number: 11N9747



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

11N9747

